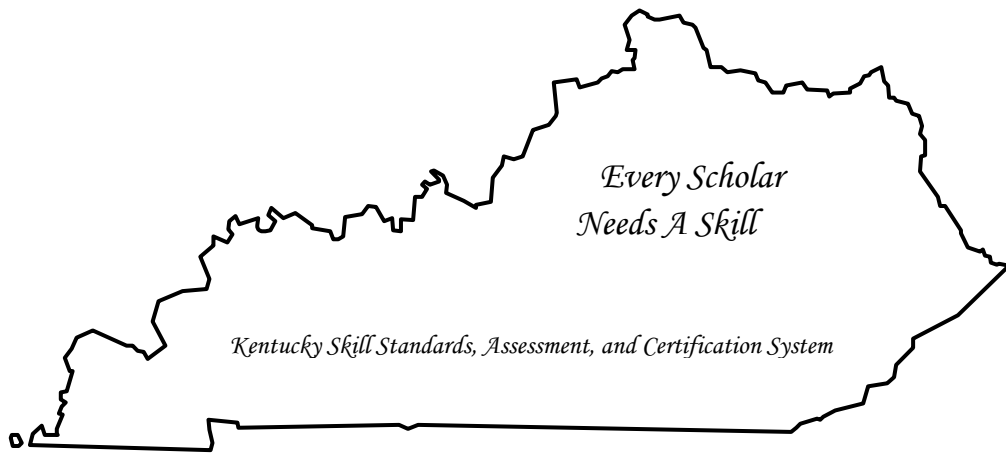


# *Kentucky Construction Skill Standards*



Established by the Construction Skill Standards Task Force

Revised  
April 2002

## *ACKNOWLEDGMENTS*

As Project Coordinator for the Construction Skill Standards Project, I have been privileged to work with outstanding Business and Industry Apprenticeship Representatives and teachers from secondary industrial technology education programs across the state. These teachers represent area technology centers, high school programs, and locally operated vocational centers. This group has reviewed, endorsed, edited, rewritten, and revised documentation relating to this skill standards projects.

The mission of the Construction Skill Standards Task Force was to develop a “user-friendly” document that would serve as a tool for instruction for all industrial technology education teachers. Our hope is that schools/teachers will use this document as a framework for further curriculum development. Future plans for the Task Force will include regular reviews and updates to the document as other career major areas are implemented.

A project of this significance relies heavily on the support and cooperation of many. The state effort could not have been accomplished without the persistence and guidance from Pamela Moore, State Skill Standards Project Director, and Mikala Rahn, national consultant for the effort. On behalf of the Kentucky Department of Education, Division of Career and Technical Education, I would like to acknowledge the support of the Construction Skill Standards Task Force and the contribution they made to this project. The following persons served on this task force:

Fred Knickerbocker, Department for Technical Education  
Doug Keaton, Harrison Co. Area Technology Center  
Cassandra Webb, Lawrence Co. High School  
David Lawson, Carroll Co. Area Technology Center  
Paul McPherson, Garrard Co. Area Technology Center  
Sharron Oxendine, George Rogers Clark High School

The following business and industry representatives assisted with the development and/or review of the project and have endorsed the attached standards:

Eric Highley, Executive V.P., Associated General Contractors of Kentucky  
J. Michael Fleitz, Ky. State District Council of Carpenter’s AFL-CIO  
and the Building Trades Apprenticeship Coordinators/Directors Association of  
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With Many Thanks,

Larry Helphinstine, Industrial Technology Education Consultant  
Kentucky Department of Education  
Division of Career and Technical Education

## **INTRODUCTION**

### **Construction Career Cluster Core**

In 1990, the Kentucky Education Reform Act (KERA) academic goals outlined what every student in Kentucky schools should know and be able to do. In 1999, Kentucky began the Kentucky Construction Skill Standards that answers the question: “What does a worker need to know and be able to do to contribute to the safe and effective delivery of construction occupations and related occupations?” The standards inform current and future construction employers, employees and educators about what skills and knowledge workers need in order to succeed—in a job, a life-long career and as in the role of wage earner.

The need for development of skill standards originated at a summit called by the National Governors Association, the Education Commission of the States and the president of IBM Corporation. The focus of this summit looked at how standards for education and technology could be developed across the country to increase student achievement. As a result, Governor Paul Patton directed the Workforce Development Cabinet and the Department of Education to work on three objectives:

- Give more value to student work in high schools
- Utilize standards to reflect high expectations
- Apply performance (skill) standards to occupations

The Construction Industry is one of the largest industries in the world, but in light of this industry’s significance, uniqueness, and increasing complexity, few people understand the intricacy of how industry functions, its impact upon our nation, and the opportunities it provides. Richard Henak wrote this statement in 1994 regarding our future challenge.

The construction industry is one of the fastest growing industries in the United States. Like other industries, the construction field has a variety of high quality jobs and opportunities for our youth to choose as a career path. However, this field is experiencing a major shortage of quality workers in all parts of the profession. The purpose of these standards is to provide a common framework of basic skills needed for all individuals entering the field of construction. With the attainment of these skills there are several avenues available for students to pursue their careers including apprenticeships, entry-level employment and post secondary education opportunities.

These standards are derived from the input of the Construction Industry Task Force and will be part of the Kentucky Skill Standards, Assessment and Certification System.

#### **Preparation for Tomorrow’s Workforce**

Carl D. Perkins Vocational and Technology Act of 1990 mandates broad vocational, rather than job-specific, training and an integration of academic and vocational content. The Act requires programs to provide students with a general understanding of “all aspects of an industry.” More recently, the first of the five Indicators of Performance in the new Perkins legislation addresses “student attainment of challenging state-established academic and vocational/technical skill proficiencies.”

Skill Standards are the performance specifications that identify the knowledge, skills and abilities, and individual needs to succeed in the workplace. Identifying the necessary skills is

critical to preparing students for entry into employment. Skill standards provide a common vocabulary to enhance communication between:

- Employers, Apprenticeship, and Job Seekers—to specify the knowledge, skills, aptitudes and attitudes required for recruitment, hiring, and retention or within an industry.
- Employers and Schools or Job Apprenticeship Training programs--to encourage the alignment of school curricula with industry requirements, to update educational objectives as workplace demands change, and to ensure a better return on public and private education and training investments.
- Employers or Job Seekers, Apprenticeship, and Schools or Job Training Programs--to help employees and job seekers make decisions about their own education and training needs in a changing market place.

In the most successful workplaces, the only constant is change. Jobs that were previously simple now require high performance work processes and enhanced skills in order to compete globally. Skill standards reflect these changing workplace realities and are keys for helping applicants and employers enjoy greater career opportunities and achieve higher standards of living and economic security.

#### Kentucky's Certification System

Skill standards are important today to educators, employers, and building trades students who desire jobs after graduation from high school. The Division of Career and Technical Education, in conjunction with building trades employers, apprenticeships from the construction industry, are working together to develop a system to certify that students have attained the necessary skills for employment. The first step in developing this system was the development or adoption of skill standards that describe the necessary occupational, academic and employability skills needed to enter the industry. Mastery of these standards would signal that the student is employable and ready to begin employment with the industry.

In order to insure that students in fact attained the necessary skills described in the standards document, students will take an assessment based on the standards. The assessment system includes two components:

Multiple-choice questions specifically testing the mastery of the Skill Standards; and

Problem-based scenario to test the students problem solving and decision-Making skills related to their occupational standards.

Students that pass each of the components at a percentage previously set, will receive an industry recognized certificate that communicates their mastery of the standards.

#### Program for Industrial Technology Education Construction Skill Standards

Students should complete courses from the secondary Industrial Technology Education Construction Cluster curriculum. This curriculum is aligned with comparable courses from the Kentucky Tech Curriculum. There are four Career Clusters: Transportation Technology, Manufacturing Technology, Construction Technology, and Communications Technology. Courses under each major must also be in the Kentucky Program of Studies or comparable

courses from the Kentucky Tech Curriculum. In order to be successful on the Skill Standards assessment, students should complete a minimum of three credits from the following courses or comparable Kentucky Tech courses: Masonry, Residential-Commercial Carpentry, Residential-Commercial Electricity, Plumbing Technology, Metal Fabrication, Welding and Wood Products Manufacturing.

The Kentucky Construction Core Skill Standards can be used as a framework for linking academic curricula to actual teaching practices, school to work, secondary education to post-secondary education, and students to their community. These connections will strengthen the construction industry.

SkillsUSA VICA incorporates academic, employability, and occupational skill standards into the competitive events program at the regional, state and national levels.

The Skill Standards Document describes the skill standards to be assessed in the certification process. Current curriculum in Industrial Technology Education offered in your school should be aligned to these standards. A crosswalk shows the relationship between the Construction core skill standards, Kentucky academic expectations, and the Secretary's Commission on Achieving Necessary Skills (SCANS). SCANS was developed by the U.S. Department of Labor in 1991 with the involvement of employers from all across the nation. They describe the necessary foundation skills and competencies necessary to succeed in the workplace. The Kentucky Workforce Roundtable and other organizations have adopted the employability skills to communicate the needs of industry to schools.

For more information about the skill standards, crosswalks or certification system for Industrial Technology Education, please contact:

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	<b>ACADEMIC STANDARDS</b>
<b>AA</b>	<b>Math and Measurement</b>
AA001	Demonstrate addition, subtraction, multiplication, and division of the following with and without the use of a calculator (whole numbers, decimals, fractions)
AA002	Measuring with an English ruler, a metric ruler, an architect's scale, engineer's scale, and tape measures
AA003	Calculating area and perimeter of rectangles, squares, parallelograms, trapezoids, triangles, and circles
AA004	Calculating surface area, lateral area, and volume of 3-D figures including: rectangular solids, pyramids, cubes, cones, cylinders, and spheres
AA005	Work with ratios and proportions
AA006	Demonstrate the application of Pythagorean Theory
AA007	Demonstrate right angle trigonometry
AA008	Convert fractional measurement to decimal measurement
AA009	Convert between US and metric measurement systems
AA010	Use hand-held calculators
AA011	Compare calculated measurements for accuracy
<b>AB</b>	<b>Blueprint Reading</b>
AB001	Read process information and follow instructions
AB002	Use correct terminology
AB003	Use correct spelling
AB004	Write with accuracy, conciseness, and clarity
AB005	Possess basic keyboarding skills
AB006	Identify and demonstrate basics communications (listening, written, oral, etc.)
AB007	Distinguish between print and job site dimensions
<b>AC</b>	<b>Business Planning and Operations</b>
AC001	Define the term "profit"
AC002	Identify methods of planning that will save a contractor money, time, and materials
AC003	Demonstrate use of industry related software packages
<b>AD</b>	<b>Learning Skills</b>
AD001	Identify personal preferred learning styles
AD002	Demonstrate ability to learn new process steps
AD003	Implement new process steps given oral instructions
AD004	Read process instructions and implement appropriate steps
<b>AE</b>	<b>Communications and Workcrew</b>
AE001	Identify interpersonal characteristics of people working together
AE002	Identify and demonstrate effective leadership techniques
AE003	Demonstrate productive relationships within the workcrew
AE004	Identify the components of an effective oral presentation
	<b>EMPLOYABILITY STANDARDS</b>
<b>EA</b>	<b>Workplace Responsibilities and Safety</b>
EA001	Assume responsibility for decisions and actions
EA002	Demonstrate a willingness to learn
EA003	Demonstrate the ability to work as a crew member
EA004	Identify the importance of performing quality work
EA005	Display initiative
EA006	Assume responsibility for the personal safety of self and others

EA007	Be a dependable worker punctual arrival, regular attendance, etc.)
EA008	Practice time management
EA009	Comply with safety guidelines
EA010	Demonstrate a positive attitude towards safety
<b>EB</b>	<b>Business Planning and Operations</b>
EB001	Identify the components that lead to customer satisfaction
EB002	Demonstrate positive self-image
EB003	Identify some ways that the level of customer satisfaction may affect company success
EB004	Explain the importance of business reputation
EB005	Identify the ways that customer satisfaction influences a business reputation
EB006	Identify possible actions that may be used to correct customer dissatisfaction
EB007	Identify immediate and real costs of an accident to a company
EB008	Identify methods of preventing accidents in the workplace
<b>EC</b>	<b>Workforce Issues</b>
EC001	Recognize the difference between a workcrew environment and a conventional workplace
EC002	Identify the characteristics of a diverse workforce
EC003	Identify and demonstrate ethical characteristics and behaviors
EC004	Differentiate between good and poor business ethics
EC005	Match employee responsibilities to employer expectations
EC006	Define discrimination, harassment, and equity
EC007	Demonstrate non-discriminatory behavior
EC008	Maintain confidentiality and sensitivity of company information
EC009	Demonstrate consistently punctual arrival
EC010	Demonstrate the ability to act in a polite and professional way towards co-workers
EC011	Recognize the importance of completing tasks on time and accurately
EC012	Demonstrate the ability to make career decisions
EC013	Participate in an employment interview
EC014	Be truthful in all communications with co-workers and supervisors
EC015	Accept constructive criticism
EC016	Work with minimal supervision
EC017	Plan and organize work
EC018	Identify the components of a career portfolio for employers
EC019	Demonstrate knowledge of conflict resolution techniques
	<b>OCCUPATIONAL STANDARDS</b>
<b>OA</b>	<b>Blueprint Reading</b>
OA001	Interpret a list of architectural terms associated with plan reading
OA002	Identify different architectural line types
OA003	Interpret specifications
OA004	Determine overall dimensions
OA005	Interpret various symbols
OA006	Display an understanding of door and window schedules
OA007	Identify mechanical, concrete, framing, and building procedures and techniques as related to drawings
OA008	Identify specific hardware for a construction project
<b>OB</b>	<b>Workforce Issues</b>
OB001	Demonstrate safe, careful use, treatment and maintenance of tools, equipment and machines
OB002	Demonstrate knowledge of safety practices that relate to the construction industry
OB003	Identify the various types of training available in the construction industry

[illegible]



# Construction Crosswalk of Skill Standards to Academic Expectations and SCANS

## Skill Standards

## Kentucky Academic Expectations

## SCANS

	ACADEMIC STANDARDS				
<b>AA</b>	<b>Math and Measurement</b>				
AA001	Demonstrate addition, subtraction, multiplication, and division of the following with and without the use of a calculator (whole numbers, decimals, fractions)	2.7 2.8	Number Mathematical Procedures	F3	Arithmetic
AA002	Measuring with an English ruler, a metric ruler, an architect's scale, engineer's scale, and tape measures	2.7 2.8 2.10 5.1	Number Mathematical Procedures Measurement Critical Thinking	F3 F4 F12	Arithmetic Mathematics Reasoning
AA003	Calculating area and perimeter of rectangles, squares, parallelograms, trapezoids, triangles, and circles	2.7 2.8 2.9 5.1	Number Mathematical Procedures Space and Dimensionality Critical Thinking	F3 F4 F12	Arithmetic Mathematics Reasoning
AA004	Calculating surface area, lateral area, and volume of 3-D figures including: rectangular solids, pyramids, cubes, cones, cylinders, and spheres	2.7 2.8 2.9 5.1	Number Mathematical Procedures Space and Dimensionality Critical Thinking	F3 F4 F12	Arithmetic Mathematics Reasoning
AA005	Work with ratios and proportions	2.7 2.8	Number Mathematical Procedures	F3 F4	Arithmetic Mathematics
AA006	Demonstrate the application Pythagorean Theory	2.7 2.8 2.9 5.1	Number Mathematical Procedures Space and Dimensionality Critical Thinking	F3 F4 F9 F11	Arithmetic Mathematics Problem Solving Knows How to Learn
AA007	Demonstrate right angle trigonometry	2.7 2.8 2.9	Number Mathematical Procedures Space and Dimensionality	F3 F4	Arithmetic Mathematics
AA008	Convert fractional measurement to decimal measurement	2.7 2.8	Number Mathematical Procedures	F3 F4	Arithmetic Mathematics
AA009	Convert between US and metric measurement systems	2.7 2.8 2.10 5.1	Number Mathematical Procedures Measurement Critical Thinking	F3 F4 F12	Arithmetic Mathematics Reasoning
AA010	Use hand-held calculators	2.7 2.8	Number Mathematical Procedures	C19	Applies Technology to a Task
AA011	Compare calculated measurements for accuracy	2.7 2.8 5.1 2.10	Number Mathematical Procedures Critical Thinking Measurement	C7 F3 F4 F12	Interprets and Communicates Information Arithmetic Mathematics Reasoning

# Construction Crosswalk of Skill Standards to Academic Expectations and SCANS

Skill Standards		Kentucky Academic Expectations		SCANS	
<b>AB</b>	<b>Blueprint Reading</b>				
AB001	Read process information and follow instructions	1.2	Reading	C5 C6 C7 F1	Acquires and Evaluates Information Organizes and Maintains Information Interprets and Communicates Information Reading
AB002	Use correct terminology	1.11	Writing	C7 F2	Interprets and Communicates Information Writing
AB003	Use correct spelling	1.11	Writing	C7 F2	Interprets and Communicates Information Writing
AB004	Write with accuracy, conciseness, and clarity	1.11 5.1	Writing Critical Thinking	C7 F2	Interprets and Communicates Information Writing
AB005	Possess basic keyboarding skills	1.16	Using Electronic Technology	C8 F1	Uses Computers to Process Information Reading
AB006	Identify and demonstrate basic communication skills (listening, written, oral, etc.)	1.2 1.3 1.4 1.11 1.12	Reading Observing Listening Writing Speaking	C7 F1 F2 F5 F6 F11	Interprets and Communicates Information Reading Writing Listening Speaking Knows How to Learn
AB007	Distinguish between print and jobsite dimensions	2.8 2.10 5.1	Space and Dimensionality Measurement Critical Thinking	C7 C5	Interprets and Communicates Information Acquires and Evaluates Information
<b>AC</b>	<b>Business Planning and Operations</b>				
AC001	Define the term "profit"	2.18	Structure and Function of Economic System	C7 F2 F6	Interprets and Communicates Information Writing Speaking
AC002	Identify methods of planning that will save a contractor money, time and materials	1.1 1.2 1.3 1.4 1.11 1.12 2.18 5.2	Accessing Sources of Information Reading Observing Listening Writing Speaking Structure and Function of Economic System Creative Thinking	C7 F2 F6 F7 F9	Interprets and Communicates Information Writing Speaking Creative Thinking Problem Solving
AC003	Demonstrate use of industry related software packages	1.16	Using Electronic Technology	C8	Uses Computers to Process Information

# Construction Crosswalk of Skill Standards to Academic Expectations and SCANS

Skill Standards			Kentucky Academic Expectations		SCANS
AD	Learning Skills				
AD001	Identify personal preferred learning styles	3.1	Positive Growth in Self-Concept Task/Project	F1 F5 F11 F14 F16	Reading Listening Knows How to Learn Self-Esteem Self-Management
AD002	Demonstrate ability to learn new process steps	3.1 3.3 3.7 5.1 5.3	Positive Growth in Self-Concept Task/Project Adaptable and Flexible Learn On One's Own Critical Thinking Conceptualizing	C6 C15 F1 F5 F9 F12	Organizes and Maintains Information Understands Systems Reading Listening Problem Solving Reasoning
AD003	Implement new process steps given oral instructions	1.4	Listening	C5 F5 F9	Acquires and Evaluates Information Listening Problem Solving
AD004	Read process instructions and implement appropriate steps	1.2 5.5	Reading Problem Solving	C5 F1 F9	Acquires and Evaluates Information Reading Problem Solving
AE	Communication and Workcrew				
AE001	Identify interpersonal characteristics of people working together	1.2 1.3 1.4	Reading Observing Listening	C7 F2 F6 F15	Interprets and Communicates Information Writing Speaking Social
AE002	Identify and demonstrate effective leadership techniques	4.1 4.2 4.4 4.5 5.1 5.4 2.16	Interpersonal Skills Productive Team Skills Rights and Responsibilities Multicultural Sensitivity Critical Thinking Decision Making Structure and function of Social System	C5 C6 C7 C12 F5 F6 F7 F8 F9 F13 F14 F16 F17 F1 F11	Acquires and Evaluates Information Organizes and Maintains Information Interprets and Communicates Information Exercises Leadership Listening Speaking Creative Thinking Decision Making Problem Solving Responsibility Self-Esteem Self-Management Integrity/Honesty Reading Know How to Learn
AE003	Demonstrate productive relationships within the workcrew	4.2	Productive Team Skills	C9 F13 F16	Participates Responsibility Self-Management

# Construction Crosswalk of Skill Standards to Academic Expectations and SCANS

Skill Standards			Kentucky Academic Expectations		SCANS
AE004	Identify the components of an effective and presentation	1.12 5.3	Speaking Conceptualizing	C7 F6 F8 F14 F15 F16	Interprets and Communicates Information Speaking Decision Making Self-Esteem Social Self-Management
<b>EMPLOYABILITY STANDARDS</b>					
<b>EA</b>	<b>Workplace Responsibilities and Safety</b>				
EA001	Assume responsibility for decisions and actions	2.31 2.32 3.5 4.3 4.4	Physical Wellness Mental and Emotional Wellness Self-Control and Self-Discipline Consistent, Responsive, Caring Behavior Rights and Responsibilities	C9 F9 F13 F16 F17	Participates Problem Solving Responsibility Self-Management Integrity/Honesty
EA002	Demonstrate a willingness to learn	3.7	Learn On One's Own	C5 F11	Acquires and Evaluates Information Knows How to Learn
EA003	Demonstrate the ability to work as a crew member	4.2 5.4	Productive Team Skills Decision Making	C9 F9 F13 F16 F17	Participates Problem Solving Responsibility Self-Management Integrity/Honesty
EA004	Identify the importance of performing quality work	2.37	Employability Skills	C5 C16 C20 F9 F13 F16	Acquires and Evaluates Information Monitors and Corrects Performance Maintains and Troubleshoots Technology Problem Solving Responsibility Self-Management
EA005	Display initiative	2.37 3.4 3.7	Employability Skills	F13 F16	Responsibility Self-Management
EA006	Assume responsibility for the personal safety of self and others	2.31 2.32 3.5 4.3 4.4	Physical Wellness Mental and Emotional wellness Self-Control and Self-Discipline Consistent, Responsive, Caring Behavior Rights and Responsibilities	C9 C11 C12 F5 F6 F9 F12 F13 F16 F17	Participates Serves Clients/Customers Exercises Leadership Listening Speaking Problem Solving Reasoning Responsibility Self-Management Integrity/Honesty

# Construction Crosswalk of Skill Standards to Academic Expectations and SCANS

Skill Standards		Kentucky Academic Expectations		SCANS	
EA007	Be a dependable worker (punctual arrival, regular attendance, etc)	2.37 3.3 3.4 3.5 3.6 3.7 4.3 4.4 1.11	Employability Skills Adaptable and Flexible Resourceful and Creative Self-Control and Self-Discipline Ethical Values Learn On One's Own Consistent, Responsive, Caring Behavior Rights and Responsibilities Writing	F13 F16 F17	Responsibility Self-Management Integrity/Honesty
EA008	Practice time management	2.37	Employability Skills	C1 F13 F16	Allocates Time Responsibility Self-Management
EA009	Comply with established safety guidelines	2.31 3.5 4.3 4.4	Physical Wellness Self-Control and Self-Discipline Consistent, Responsive, Caring Behavior Rights and Responsibilities	C7 C9 C16 C20 F1 F5 F8 F12 F13 F16 F17	Interprets and Communicates Information Participates Monitors and Corrects Performance Maintains and Troubleshoots Technology Reading Listening Decision Making Reasoning Responsibility Self-Management Integrity/Honesty
EA010	Demonstrate a positive attitude towards safety	2.31 2.32 3.5 4.3 4.4	Physical Wellness Mental and Emotional Wellness Self-Control and Self-Discipline Consistent, Responsive, Caring Behavior Rights and Responsibilities	C9 F13 F16 F17	Participates Responsibility Self-Management Integrity/Honesty
<b>EB</b>	<b>Business Planning and Operations</b>				
EB001	Identify the components that lead to customer satisfaction	1.2 1.3 1.4 4.1 5.4 6.1	Reading Observing Listening Interpersonal Skills Decision Making Applying Multiple Perspectives	C6 C7	Organizes and Maintains Information Interprets and Communicates Information
EB002	Demonstrate positive self-image				

# Construction Crosswalk of Skill Standards to Academic Expectations and SCANS

Skill Standards		Kentucky Academic Expectations		SCANS	
EB003	Identify some ways that the level of customer satisfaction may affect company success	1.2 1.3 1.4 4.1 5.1 6.2	Reading Observing Listening Interpersonal Skills Critical Thinking Developing New Knowledge	C7 C11 F12	Interprets and Communicates Information Serves Clients/Customers Reasoning
EB004	Explain the importance of business reputation	1.11 1.12 5.1	Writing Speaking Critical Thinking	C7 C11	Interprets and Communicates Information Serves Clients/Customers
EB005	Identify the ways that customer satisfaction influences a business reputation	1.2 1.3 1.4 4.1 5.1 5.4 6.1	Reading Observing Listening Interpersonal Skills Critical Thinking Decision Making Applying Multiple Perspectives	C7 C11 F8	Interprets and Communicates Information Serves Clients/Customers Decision Making
EB006	Identify possible actions that may be used to correct customer dissatisfaction	1.2 1.3 1.4 1.11 1.12 2.18	Reading Observing Listening Writing Speaking Structure and Function of Economic System	C7 C11 F2 F6 F9	Interprets and Communicates Information Serves Clients/Customers Writing Speaking Problem Solving
EB007	Identify immediate and real costs of an accident to a company	1.2 1.3 1.4 1.11 1.12 2.18 5.1	Reading Observing Listening Writing Speaking Structure and Function of Economic System Critical Thinking	C7 C15 F2 F6 F12	Interprets and Communicates Information Understands Systems Writing Speaking Reasoning
EB008	Identify methods of preventing accidents in the workplace	1.2 1.3 1.4 1.11 1.12	Reading Observing Listening Writing Speaking	C7 C9 C15 C20 F2 F6 F9 F12	Interprets and Communicates Information Problem Solving Understands Systems Maintains and Troubleshoots Technology Writing Speaking Problem Solving Reasoning

# Construction Crosswalk of Skill Standards to Academic Expectations and SCANS

Skill Standards		Kentucky Academic Expectations		SCANS	
EC	Workforce Issues				
EC001	Recognize the difference between a workcrew environment and a conventional workplace	1.2 1.3 1.4 4.1 4.2 4.5	Reading Observing Listening Interpersonal Skills Productive Team Skills Multicultural Sensitivity	C5 C7 C9 C15	Acquires and Evaluates Information Interprets and Communicates Information Problem Solving Understands Systems
EC002	Identify the characteristics of a diverse workforce	2.17 2.26 4.5 4.6 5.3	Cultural Diversity Diversity Multicultural Sensitivity Open Mind to Alternative Perspectives Conceptualizing	C7 C9 C14 F13 F15 F16 F17	Interprets and Communicates Information Problem Solving Works with Cultural Diversity Responsibility Social Self-Management Integrity/Honesty
EC003	Identify and demonstrate ethical characteristics and behaviors	2.29 2.32 3.6 5.4	Family Life and Parenting Mental and Emotional Wellness Ethical Values Decision Making	C5 C7 C9 F13 F15 F17	Acquires and Evaluates Information Interprets and Communicates Information Problem Solving Responsibility Social Integrity/Honesty
EC004	Differentiate between good and poor business ethics	3.6	Ethical Values	C5 F13 F15 F17	Acquires and Evaluates Information Responsibility Social Integrity/Honesty
EC005	Match employee responsibilities to employer expectations	3.3 4.1 4.4 5.1 5.2	Adaptable and Flexible Interpersonal Skills Rights and Responsibilities Critical Thinking Conceptualizing	C5 C6 C7 C11 C16 F5 F6 F11 F12 F13 F16	Acquires and Evaluates Information Organizes and Maintains Information Interprets and Communicates Information Serves Clients/Customers Monitors and Corrects Performance Listening Speaking Knows How to Learn Reasoning Responsibility Self-Management
EC006	Define discrimination, harassment, and equity	1.1 1.2 1.3 1.4 1.11 1.12	Accessing Sources of Information Reading Observing Listening Writing Speaking	C7 C14 F1 F5 F6 F16 F17	Interprets and Communicates Information Works with Cultural Diversity Reading Listening Speaking Self-Management Integrity/Honesty

# Construction Crosswalk of Skill Standards to Academic Expectations and SCANS

Skill Standards			Kentucky Academic Expectations		SCANS
EC007	Demonstrate non-discriminatory behavior	3.5	Self-Control and Self-Discipline	C9 C10 C14 F13 F15 F16 F17	Participates Teaches Others Works with Cultural Diversity Responsibility Social Self-Management Integrity/Honesty
EC008	Maintain confidentiality and sensitivity of company information	3.6	Ethical Values	C6 C11 C12 F13 F16 F17	Organizes and Maintains Information Serves Clients/Customers Exercises Leadership Responsibility Self-Management Integrity/Honesty
EC009	Demonstrate appropriate dress and hygiene for successful employment	3.5 4.4	Self-Control and Self-Discipline Rights and Responsibilities	C6 F1 F5 F16	Organizes and Maintains Information Reading Listening Self-Management
EC010	Demonstrate the ability to act in a polite and professional way towards co-workers	4.1 4.2 4.3 4.4 4.5 4.6	Interpersonal Skills Productive Team Skills Consistent, Responsive, Caring Behavior Rights and Responsibilities Multicultural Sensitivity Open Mind to Alternative Perspectives	F5 F6 F16	Listening Speaking Self-Management
EC011	Recognize the importance of completing tasks on time and accurately	2.37 3.5 4.4	Employability Skills Self-Control and Self-Discipline Rights and Responsibilities	C6 C9 C11 C16 F13 F16 F17	Organizes and Maintains Information Participates Serves Clients/Customers Monitors and Corrects Performance Responsibility Self-Management Integrity/Honesty
EC012	Demonstrate the ability to make career decisions	2.36 5.4	Career Path Decision Making	C5 F8 F11 F13 F14 F16	Acquires and Evaluates Information Decision Making Knows How to Learn Responsibility Self-Esteem Self-Management



# Construction Crosswalk of Skill Standards to Academic Expectations and SCANS

Skill Standards		Kentucky Academic Expectations		SCANS	
EC013	Participate in an employment interview	2.38 5.4	Post-Secondary Opportunity Search Decision Making	C7 C14 F5 F6 F11 F12 F15 F16 F17	Interprets and Communicates Information Works with Cultural Diversity Listening Speaking Knows How to Learn Reasoning Social Self-Management Integrity/Honesty
EC014	Be truthful in all communications with co-workers and supervisors	3.6 4.3 4.4	Ethical Values Consistent, Responsive, Caring Behavior Rights and Responsibilities	C5 C6 C9 F2 F6 F13 F16 F17	Acquires and Evaluates Information Organizes and Maintains Information Participates Writing Speaking Responsibility Self-Management Integrity/Honesty
EC015	Accept constructive criticism	3.1 4.6	Positive Growth in Self-Concept Task/Project Open Mind to Alternative Perspectives	C7 C9 C12 C16 F5 F6 F11 F13 F14 F16	Interprets and Communicates Information Participates Exercises Leadership Monitors and Corrects Performance Listening Speaking Knows How to Learn Responsibility Self-Esteem Self-Management
EC016	Work with minimal supervision	2.37 3.3 3.4 3.5 3.6 3.7 4.4 5.1 5.4	Employability Skills Adaptable and Flexible Resourceful and Creative Self-Control and Self-Discipline Ethical Values Learn On One's Own Rights and Responsibilities Critical Thinking Decision Making	F13 F16	Responsibility Self-Management

# Construction Crosswalk of Skill Standards to Academic Expectations and SCANS

Skill Standards			Kentucky Academic Expectations		SCANS
EC017	Plan and organize work	5.1	Critical Thinking	C1 C3 C4 C5 C7 C15 F8 F9 F13 F16	Allocates Time Allocates Materials and Facility Resources Allocates Human Resources Acquires and Evaluates Information Interprets and Communicates Information Understands Systems Decision Making Problem Solving Responsibility Self-Management
EC018	Identify the components of a career portfolio for employers	2.36 5.3	Career Path Conceptualizing	C7 F2 F6 F11 F12 F14 F16	Interprets and Communicates Information Writing Speaking Knows How to Learn Reasoning Self-Esteem Self-Management
EC019	Demonstrate knowledge of conflict resolution techniques	4.1 5.4	Interpersonal Skills Decision Making	F2 F6 C7	Writing Speaking Interprets and Communicates Information
<b>OCCUPATIONAL STANDARDS</b>					
<b>OA</b>	<b>Blueprint Reading</b>				
OA001	Interpret a list of architectural terms associated with plan reading	1.2 1.11 1.12	Reading Writing Speaking	C7 F2 F6 F12	Interprets and Communicates Information Writing Speaking Reasoning
OA002	Identify different architectural line types	1.2 1.11 1.12	Reading Writing Speaking	C7 F2 F6	Interprets and Communicates Information Writing Speaking
OA003	Interpret specifications	1.2 1.11 1.12	Reading Writing Speaking	C7 C15 C18 F2 F6	Interprets and Communicates Information Understands Systems Selects Technology Writing Speaking
OA004	Determine overall dimensions	2.10	Measurement	C5 F3	Acquires and Evaluates Information Arithmetic
OA005	Interpret various symbols	1.2 1.11 1.12	Reading Writing Speaking	C7 F2 F6	Interprets and Communicates Information Writing Speaking
OA006	Display an understanding of door and window schedules	1.2 1.10 5.1	Reading Classifying Critical Thinking	C7 F2 F6	Interprets and Communicates Information Writing Speaking

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OA007	Identify mechanical, concrete, framing and building procedures and techniques as related to drawings	1.2 2.10 1.11 1.12	Reading Measurement Writing Speaking	C7 C18 C19 F2 F6	Interprets and Communicates Information Selects Technology Applies Technology to a Task Writing Speaking
OA008	Identify specific hardware for a construction project	1.2 1.3 1.4 1.11 1.12	Reading Observing Listening Writing Speaking	C7 F1 F2 F6	Interprets and Communicates Information Reading Writing Speaking
<b>OB</b>	<b>Workforce Issues</b>				
OB001	Demonstrate safe, careful use, treatment and maintenance of tools, equipment and machines	1.16 2.31 2.37 3.5 4.3 4.4	Using Electronic Technology Physical Wellness Employability Skills Self-Control and Self-Discipline Consistent, Responsive, Caring Behavior Rights and Responsibilities	C6 C20 F1 F5 F9 F13 F16	Organizes and Maintains Information Maintains and Troubleshoots Technology Reading Listening Problem Solving Responsibility Self-Management
OB002	Demonstrate knowledge of safety practices that relate to the construction industry	1.2 1.3 1.4 3.5 4.3 4.4	Reading Observing Listening Self-Control and Self-Discipline Consistent, Responsive, Caring Behavior Rights and Responsibilities	C7 F2 F6	Interprets and Communicates Information Writing Speaking
OB003	Identify the various types of training available in the construction industry.	1.2 6.1	Reading Applying Multiple Perspectives	C5 F11	Acquires and Evaluates Information Knows How to Learn
<b>OC</b>	<b>Math and Measurement</b>				
OC001	Demonstrate proper measurement techniques	2.10 5.4	Measurement Decision Making	C5 F3 F4	Acquires and Evaluates Information Arithmetic Mathematics
OC002	Describe the appropriate application and use of measurement devices in construction	1.10 1.11 2.10 6.1	Classifying Writing Measurement Applying Multiple Perspectives	C7 F2 F6	Interprets and Communicates Information Writing Speaking
<b>OD</b>	<b>Workplace Safety and Health</b>				
OD001	Demonstrate knowledge of first aid and CPR	1.2 4.3	Reading Consistent, Responsive, Caring Behavior	C7 C15	Interprets and Communicates Information Understands Systems

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OD002	Demonstrate knowledge and understanding of bloodborne pathogens	2.6	Change Over Time	C7 C15 F1 F2 F5 F6 F11	Interprets and Communicates Information Understands Systems Reading Writing Listening Speaking Knows How to Learn
OD003	Apply appropriate first aid techniques	4.3 4.4	Consistent, Responsive, Caring Behavior Rights and Responsibilities	F13 F16 F17	Responsibility Self-Management Integrity/Honesty
OD004	Identify different types of chemical, biological and physical hazards	2.6	Change Over Time	C7 F2 F6	Interprets and Communicates Information Writing Speaking
OD005	Identify the characteristics of a safe work site	1.1 1.2 1.3 1.4 2.31 4.4	Accessing Sources of Information Reading Observing Listening Physical Wellness Rights and Responsibilities	C7 F2 F6 F13 F16 F17	Interprets and Communicates Information Writing Speaking Responsibility Self-Management Integrity/Honesty
OD006	Identify OSHA's 1926.10 Construction Standards and who enforces OSHA Rules and Regulations in Kentucky	1.1 1.2 4.4	Accessing Sources of Information Reading Rights and Responsibilities	F1 C7 F1	Reading Interprets and Communicates Information Reading
OD007	Interpret MSDS sheets	5.4	Decision Making	C7	Interprets and Communicates Information
OD008	Identify the safe and proper use of the tools of the trade	2.31 5.1	Physical Wellness Critical Thinking	F1 F16	Reading Self Management Monitors and Corrects Performance
OD009	Demonstrate knowledge and understanding of OSHA 10-hour General Safety Course	2.36 2.31	Career Path Physical Wellness	F1 C7	Reading Interprets and Communicates Information
OD010	Identify laws and regulations that relate to the construction industry	1.3 1.4	Observing Listening	C16 F13	Monitors and Corrects Performance Responsibility
OD011	Identify the various organizations representing the construction industry and their role	1.1 1.2 4.4	Accessing Sources of Information Reading Rights and Responsibilities	F1 C7	Reading Interprets and Communicates Information
<b>OE</b>	<b>Computer Use</b>				
OE001	List possible computer applications in the construction industry	1.16 6.1	Using Electronic Technology Applying Multiple Perspectives	C7 F2 F6	Interprets and Communicates Information Writing Speaking
OE002	Identify possible effects of introducing computers into construction processes	1.16 6.1	Using Electronic Technology Applying Multiple Perspectives	C7 F2 F6	Interprets and Communicates Information Writing Speaking